



## SEQUENCE LISTING

<110> Allison, James  
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<120> Compositions and Methods for Modulating Lymphocyte Activity

<130> A-71608/TAL/DHR

<140> 10/600,997  
<141> 2003-06-20

<150> US 60/390,653  
<151> 2002-06-20

<150> US 60/438,593  
<151> 2003-01-06

<160> 56

<170> PatentIn version 3.2

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Gly Lys His Phe Ile Thr Val Thr Thr Phe Thr Ser Ala Gly Asn Ile  
35 40 45

Gly Glu Asp Gly Thr Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu  
50 55 60

Asn Gly Ile Val Ile Gln Trp Leu Lys Glu Gly Ile Lys Gly Leu Val  
65 70 75 80

His Glu Phe Lys Glu Gly Lys Asp Asp Leu Ser Gln Gln His Glu Met  
85 90 95

Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Val Val Gly Asn  
100 105 110

Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr  
115 120 125

Thr Cys Tyr Ile Arg Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu  
130 135 140

Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Ile Asn Val Asp Tyr Asn  
145 150 155 160

Ala Ser Ser Glu Ser Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln  
165 170 175

Pro Thr Val Ala Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser  
180 185 190

Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met  
195 200 205

Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser  
210 215 220

Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val  
225 230 235 240

Thr Asp Ser Glu Val Lys Arg Arg Ser Gln Leu Gln Leu Leu Asn Ser  
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Gly Pro Ser Pro Cys Val Phe Ser Ser Ala Phe Ala Ala Gly Trp Ala  
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20 25 30

Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile  
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Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu  
50 55 60

Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val  
65 70 75 80

His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met  
85 90 95

Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn  
100 105 110

Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr  
115 120 125

Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu  
130 135 140

Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn  
145 150 155 160

Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln  
165 170 175

Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser  
180 185 190

Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met  
195 200 205

Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser  
210 215 220

Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val  
225 230 235 240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser  
245 250 255

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260 265 270

Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys  
275 280

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aacacatact cctgtatgat tgaaaatgac attgccaaag caacagggga tatcaaagtg	720
acagaatcgg agatcaaaag gcggagtcac ctacagctgc taaactcaaa ggcttctctg	780
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<212> PRT  
<213> Mus musculus

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Thr Lys Arg Asn Asp Glu Glu Cys Glu Val Gln Leu Asn Ile Lys Arg  
35 40 45

Asn Ser Lys His Ser Ala Trp Thr Gly Glu Leu Phe Lys Ile Glu Cys  
50 55 60

Pro Val Lys Tyr Cys Val His Arg Pro Asn Val Thr Trp Cys Lys His  
65 70 75 80

Asn Gly Thr Ile Trp Val Pro Leu Glu Val Gly Pro Gln Leu Tyr Thr  
85 90 95

Ser Trp Glu Glu Asn Arg Ser Val Pro Val Phe Val Leu His Phe Lys  
100 105 110

Pro Ile His Leu Ser Asp Asn Gly Ser Tyr Ser Cys Ser Thr Asn Phe  
115 120 125

Asn Ser Gln Val Ile Asn Ser His Ser Val Thr Ile His Val Arg Glu  
130 135 140

Arg Thr Gln Asn Ser Ser Glu His Pro Leu Ile Thr Val Ser Asp Ile  
145 150 155 160

Pro Asp Ala Thr Asn Ala Ser Gly Pro Ser Thr Met Glu Glu Arg Pro  
165 170 175

Gly Arg Thr Trp Leu Leu Tyr Thr Leu Leu Pro Leu Gly Ala Leu Leu  
180 185 190

Leu Leu Leu Ala Cys Val Cys Leu Leu Cys Phe Leu Lys Arg Ile Gln  
195 200 205

Gly Lys Glu Lys Lys Pro Ser Asp Leu Ala Gly Arg Asp Thr Asn Leu  
210 215 220

Val Asp Ile Pro Ala Ser Ser Arg Thr Asn His Gln Ala Leu Pro Ser  
225 230 235 240

Gly Thr Gly Ile Tyr Asp Asn Asp Pro Trp Ser Ser Met Gln Asp Glu  
245 250 255

Ser Glu Leu Thr Ile Ser Leu Gln Ser Glu Arg Asn Asn Gln Gly Ile  
260 265 270

Val Tyr Ala Ser Leu Asn His Cys Val Ile Gly Arg Asn Pro Arg Gln  
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Arg Ser  
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Ser Cys Asp Val Gln Leu Tyr Ile Lys Arg Gln Ser Glu His Ser Ile  
35 40 45

Leu Ala Gly Asp Pro Phe Glu Leu Glu Cys Pro Val Lys Tyr Cys Ala  
50 55 60

Asn Arg Pro His Val Thr Trp Cys Lys Leu Asn Gly Thr Thr Cys Val  
65 70 75 80

Lys Leu Glu Asp Arg Gln Thr Ser Trp Lys Glu Glu Lys Asn Ile Ser  
85 90 95

Phe Phe Ile Leu His Phe Glu Pro Val Leu Pro Asn Asp Asn Gly Ser  
100 105 110

Tyr Arg Cys Ser Ala Asn Phe Gln Ser Asn Leu Ile Glu Ser His Ser  
115 120 125

Thr Thr Leu Tyr Val Thr Asp Val Lys Ser Ala Ser Glu Arg Pro Ser  
130 135 140

Lys Asp Glu Met Ala Ser Arg Pro Trp Leu Leu Tyr Ser Leu Leu Pro  
145 150 155 160

Leu Gly Gly Leu Pro Leu Leu Ile Thr Thr Cys Phe Cys Leu Phe Cys  
165 170 175

Cys Leu Arg Arg His Gln Gly Lys Gln Asn Glu Leu Ser Asp Thr Ala  
180 185 190

Gly Arg Glu Ile Asn Leu Val Asp Ala His Leu Lys Ser Glu Gln Thr  
195 200 205

Glu Ala Ser Thr Arg Gln Asn Ser Gln Val Leu Leu Ser Glu Thr Gly  
210 215 220

Ile Tyr Asp Asn Asp Pro Asp Leu Cys Phe Arg Met Gln Glu Gly Ser  
225 230 235 240

Glu Val Tyr Ser Asn Pro Cys Leu Glu Glu Asn Lys Pro Gly Ile Val  
245 250 255

Tyr Ala Ser Leu Asn His Ser Val Ile Gly Leu Asn Ser Arg Leu Ala  
260 265 270

Arg Asn Val Lys Glu Ala Pro Thr Glu Tyr Ala Ser Ile Cys Val Arg  
275 280 285

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aagagacaat ctgaacactc catcttagca ggagatccct ttgaactaga atgccctgtg 180  
aaatactgtg ctaacaggcc tcatgtgact tgggtgcaagc tcaatggaac aacatgtgta 240  
aaacttgaag atagacaaac aagttggaag gaagagaaga acatttcatt tttcattcta 300  
cattttgaac caatgcttcc taatgacaat gggtcatacc gctgttctgc aaattttcag 360  
tctaattctca ttgaaagcca ctcaacaact ctttatgtga cagatgtaaa aggtgcctca 420  
gaacgaccct ccaaggacga agtggcaagc agaccctggc tcctgtatag ttacttcct 480  
ttggggggat tgcctctact catcactacc tggttctgcc tgttctgctg cctgagaagg 540  
caccaaggaa agcaaaatga actctctgac acagcaggaa gggaaattaa tctggttgat 600  
gctcacctta agagcgagca aacagaagca agcaccaggc aaaattccca agtactgcta 660

tcagaagctg gaatttatga taatgaccct gacctttgtt tcaggatgca ggaagggctt	720
gaagtttgtt ctaatccatg cctggaagaa aacaaaccag gcattgttta tgcttcctg	780
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Ser	Cys	Asp	Val	Gln	Leu	Tyr	Ile	Lys	Arg	Gln	Ser	Glu	His	Ser	Ile	35	40	45	
Leu	Ala	Gly	Asp	Pro	Phe	Glu	Leu	Glu	Cys	Pro	Val	Lys	Tyr	Cys	Ala	50	55	60	
Asn	Arg	Pro	His	Val	Thr	Trp	Cys	Lys	Leu	Asn	Gly	Thr	Thr	Cys	Val	65	70	75	80
Lys	Leu	Glu	Asp	Arg	Gln	Thr	Ser	Trp	Lys	Glu	Glu	Lys	Asn	Ile	Ser	85	90	95	
Phe	Phe	Ile	Leu	His	Phe	Glu	Pro	Met	Leu	Pro	Asn	Asp	Asn	Gly	Ser	100	105	110	
Tyr	Arg	Cys	Ser	Ala	Asn	Phe	Gln	Ser	Asn	Leu	Ile	Glu	Ser	His	Ser	115	120	125	
Thr	Thr	Leu	Tyr	Val	Thr	Asp	Val	Lys	Gly	Ala	Ser	Glu	Arg	Pro	Ser	130	135	140	
Lys	Asp	Glu	Val	Ala	Ser	Arg	Pro	Trp	Leu	Leu	Tyr	Ser	Leu	Leu	Pro	145	150	155	160
Leu	Gly	Gly	Leu	Pro	Leu	Leu	Ile	Thr	Thr	Trp	Phe	Cys	Leu	Phe	Cys	165	170	175	
Cys	Leu	Arg	Arg	His	Gln	Gly	Lys	Gln	Asn	Glu	Leu	Ser	Asp	Thr	Ala	180	185	190	



Gly Arg Glu Ile Asn Leu Val Asp Ala His Leu Lys Ser Glu Gln Thr  
195 200 205

Glu Ala Ser Thr Arg Gln Asn Ser Gln Val Leu Leu Ser Glu Ala Gly  
210 215 220

Ile Tyr Asp Asn Asp Pro Asp Leu Cys Phe Arg Met Gln Glu Gly Ser  
225 230 235 240

Glu Val Cys Ser Asn Pro Cys Leu Glu Glu Asn Lys Pro Gly Ile Val  
245 250 255

Tyr Ala Ser Leu Asn His Ser Val Ile Gly Leu Asn Ser Arg Leu Ala  
260 265 270

Arg Asn Val Lys Glu Ala Pro Thr Glu Tyr Ala Ser Ile Cys Val Arg  
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gaagtgcac ttaatatata gaggaattcc aaacactctg cctggacagg agagttatct 180  
aaaattgaat gtcctgtgaa atactgtggt catagaccta atgtgacttg gtgtaagcac 240  
aatggaacaa tctgggtacc ccttgaagtt ggtcctcagc tataactag ttgggaagaa 300  
aatcgatcag ttccgggttt tgttctccat tttaaaccac tacatctcag tgataacggg 360  
tcgtatagct gttctacaaa cttcaattct caagttatta atagccattc agtaaccatc 420  
catgtgagag aaaggactca aaactcttca gaacacccac taataacagt atctgacatc 480  
ccagatgcca ccaatgcctc aggaccatcc accatggaag agaggccagg caggacttgg 540  
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<212> PRT  
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Thr Lys Arg Asn Asp Glu Glu Cys Glu Val Gln Leu Asn Ile Lys Arg  
35 40 45

Asn Ser Lys His Ser Ala Trp Thr Gly Glu Leu Phe Lys Ile Glu Cys  
50 55 60

Pro Val Lys Tyr Cys Val His Arg Pro Asn Val Thr Trp Cys Lys His  
65 70 75 80

Asn Gly Thr Ile Trp Val Pro Leu Glu Val Gly Pro Gln Leu Tyr Thr  
85 90 95

Ser Trp Glu Glu Asn Arg Ser Val Pro Val Phe Val Leu His Phe Lys  
100 105 110

Pro Ile His Leu Ser Asp Asn Gly Ser Tyr Ser Cys Ser Thr Asn Phe  
115 120 125

Asn Ser Gln Val Ile Asn Ser His Ser Val Thr Ile His Val Arg Glu  
130 135 140

Arg Thr Gln Asn Ser Ser Glu His Pro Leu Ile Thr Val Ser Asp Ile  
145 150 155 160

Pro Asp Ala Thr Asn Ala Ser Gly Pro Ser Thr Met Glu Glu Arg Pro  
165 170 175

Gly Arg Thr Trp Leu Leu Tyr Thr Leu Leu Pro Leu Gly Ala Leu Leu  
180 185 190

Leu Leu Leu Ala Cys Val Cys Leu Leu Cys Phe Leu Lys Arg Ile Gln  
195 200 205

Gly Lys Glu Lys Lys Pro Ser Asp Leu Ala Gly Arg Asp Thr Asn Leu  
210 215 220

Val Asp Ile Pro Ala Ser Ser Arg Thr Asn His Gln Ala Leu Pro Ser  
 225 230 235 240

Gly Thr Gly Ile Tyr Asp Asn Asp Pro Trp Ser Ser Met Gln Asp Glu  
 245 250 255

Ser Glu Leu Thr Ile Ser Leu Gln Ser Glu Arg Asn Asn Gln Gly Ile  
 260 265 270

Val Tyr Ala Ser Leu Asn His Cys Val Ile Gly Arg Asn Pro Arg Gln  
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Arg Ser  
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 tgggtgaagc acaatggaac aatctgggta ccccttgaag ttggctcctca gctatacact 180  
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<213> Mus musculus

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agttgggaag	aaaatcgatc	agttccggtt	ttgtttctcc	attttaaacc	aatacatctc	240
agtgataacg	ggtcgtatag	ctgttctaca	aacttcaatt	ctcaagttat	taatagccat	300
tcagtaacca	tccatgtgag	ag				322

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<212> DNA

<213> Mus musculus

<400> 16

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tcagtaacca tccatgtgag ag	322

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tggtgtaagc acaatggaac aatctgggta ccccttgaag ttggctctca gctataact	180
agttggaag aaaatcgatc agttccggtt tttgttctcc attttaaac aatacatctc	240
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tcagtaacca tccatgtgag ag	322

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